

# Installation Guide

Sound proofing  
the engine compartment



# Installer's checklist to read before starting to work.

- Read the instructions carefully and plan your work well.
- Take measures of the insulation areas.
- Carve cutting templates shaped like the areas to be insulated. Cardboard is a good material for this.
- Cut all the insulation materials with the help of the cardboard templates and a sharp knife.
- Fit the pieces and carefully clean the surface before applying the adhesive.
- Use high-quality adhesive.
- Do not use the adhesive excessively.
- Do not apply the adhesive directly on the surface of the insulation board.
- Do not use any of the Reduce Series Core Products on wet areas, for those, use always Reduce Bitumen and for the bilge and the Reduce Heavy Layer for interiors.
- Do not leave gaps or areas uninsulated.
- Do not block the air intake openings.
- Use the Reduce Seal Tape to finalize corners and sides that are not protected.

# Materials



**Meluton Reduce Pro+ PUR A8** Combining the Basic and the Pro model, the Pro+ provides you with the best noise insulation on the market. Use it in surfaces near the source of the sound whenever you have 65mm of installation space.



**Meluton Reduce Pro A8** Professional level noise insulation and fire protection. Use the Reduce Pro in surfaces near the source of the sound whenever you have 35mm of installation space.



**Meluton Reduce Premium Eggbox** Premium level noise insulation, use the Reduce Premium in surfaces near the source of the sound whenever you have 28mm of installation space.



**Meluton Reduce Basic PUR** Use the Reduce Basic in surfaces distant to the source of the sound to dampen the echo.



**Meluton Reduce Heat** Use it to cover areas that are affected by the heat sources such as engine compartment or exhaust area.



**Meluton Reduce Bitumen** Use it to enhance the noise insulation in wet areas outside your vessel.



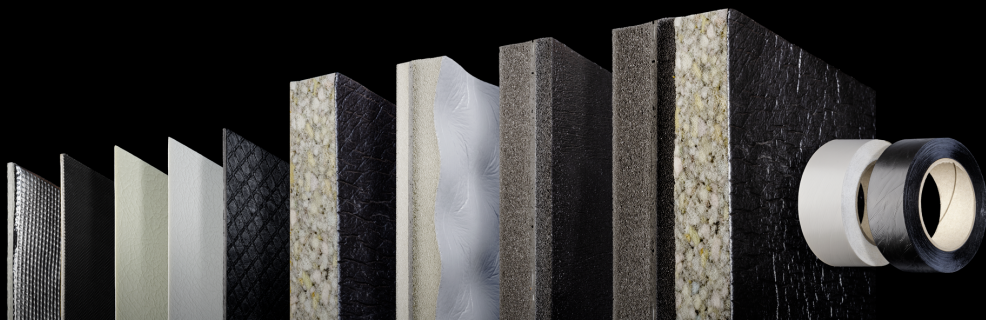
**Meluton Reduce Heavy Layer** Use it to enhance the noise insulation in wet areas inside your vessel.



**Meluton Reduce Pelon Marina** Use it to provide finished interior and protection from condensation in your cabins.



**Meluton Reduce Seal Tape** Finalise your installation by securing the corners and sides of the noise insulation materials with the Reduce Seal Tape.



# Step 1

## Measurements & Fitting

Measure the inside dimensions of the engine compartment (picture 1). Create the blueprints or draw, for example, cardboard models. Pay particular attention to ensure that the insulation will be as seamless as possible. The insulation should retain its nominal thickness in the corners and folds.

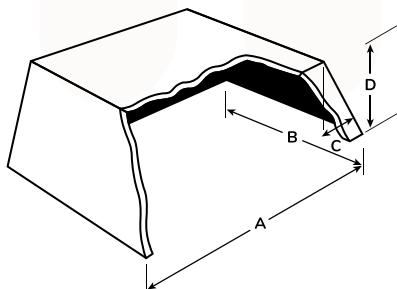
Remember to also consider the bilge. For bilge, the best option is the Meluton Reduce Heavy Layer, that does not absorb liquids, which makes it safe to use in wet areas. For other wet areas we recommend the Meluton Reduce Bitumen.

A noise lock can be built around the air intake (picture 2). The noise lock should not interfere with air circulation and, thus, cooling. The size of the noise lock depends on the diameter of the air intake. If there is enough space, it is possible to create the noise lock inside the engine cover.

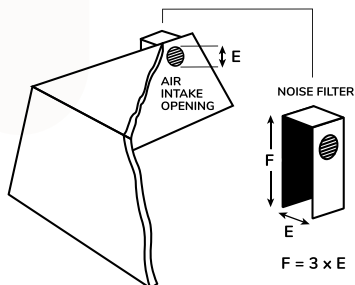
When you want the best possible soundproofing and there is enough space, you can notably increase soundproofing by installing another layer of the Meluton Reduce Basic PUR. Combining this with the Meluton Pro A8 creates the ultimate noise insulation system.

When installed in this way, the heavier Pro A8 is attached to the hard frame, e.g. engine cover, and the lighter Basic PUR is attached to its surface, closer to the source of sound. The highest quality boat manufacturers such as Targa of Botnia Marin, use this Meluton Reduce Pro+ solution.

Finally, calculate the required amount of insulation.



Picture 1



Picture 2



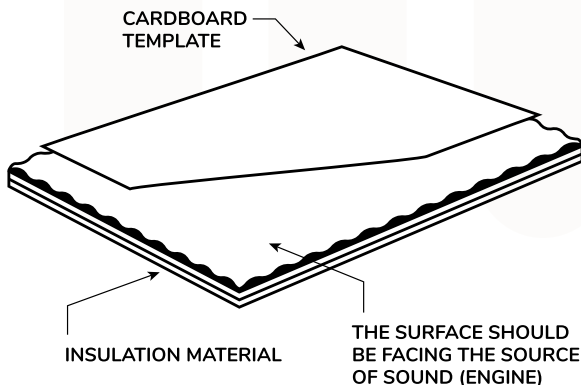
# Step 2

## Cleaning the Surfaces & Cutting the Insulation Material

Carefully clean the surface to which you will attach the insulation. In order to achieve good adhesion, it is important that there are no impurities such as grease on the surface. Use a solvent to clean the surface thoroughly.

Remember that the surface of the insulation should face the source of sound (Picture 3). You can recognise the surface of the insulation by its colour; Reduce Basic Pur and Reduce Pro A8 have a black surface and the Reduce Premium Eggbox has a white surface.

Place a cardboard model (template) on top of the insulating board or sketch the shape of the piece you want with a pencil. Cutting can easily be done with a sharp carpet knife. Press the insulation together as you cut. Stock up on spare blades, because the blades get dull due to the mineral layer of the material. Use a flat surface for the cutting. Long and even cuts ensure a smooth cutting surface.



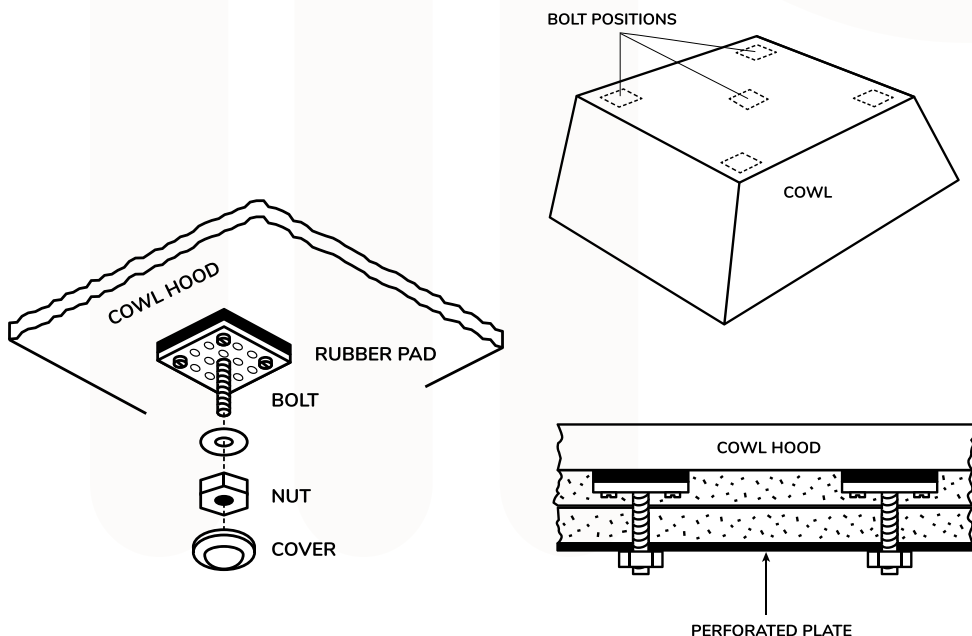
Picture 3

# Step 3

## Mounting the Bolts

If you are using bolts, attach them to the engine cover now. Bolts should be placed in the corners and in the middle. You can also improve the fastening by using perforated plates or strips.

This makes it easier to attach the product to, for example, the ceiling. Do not bolt directly through the roofing material. The use of rubber pads is also recommended. (picture 4)



Picture 4

# Step 4

## Adhering

Remember to check the application temperature of the adhesive before you start this step.

Recommended adhesives: Sikaflex 221, Kiiltotflex K

Before applying the adhesive, try to fit all the pieces together.

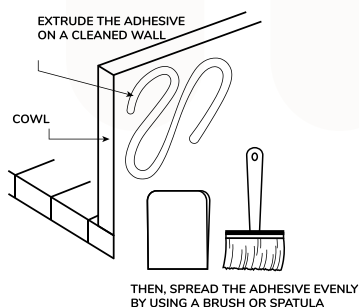
At first, extrude the adhesive for example by making a large letter S. Then, spread the adhesive evenly with a brush or spatula. (picture 5)

Expose the insulating material sheet by pressing the bottom of the sheet against the wall. The pores will absorb the adhesive from the wall. Take the plate off the wall and allow it to breathe for a while (approx. 1 to 5 mins, depending on the adhesive).

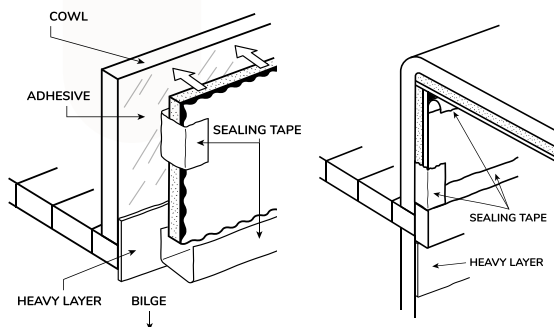
Do not apply the adhesive directly onto the sheet, because the sheet is porous at the bottom and would absorb a lot of adhesive. Too much adhesive would also weaken the functioning of the distancing layer.

Finally, attach the sheet by pressing it properly and use supporting structures if possible. Let the adhesive dry fully.

You get the best end result by finishing the work with the Meluton Reduce Seal Tape, which protects the insulation from moisture and impurities. The tape is installed on the edge of the sheet. (picture 6)



Picture 5



Picture 6

